

Department of Civil and Environmental Engineering / Azrieli School of Architecture
Carleton University



Historic Site Recording and Assessment

CIVE 3207 / ARCN 4100

2020 Fall Session

Instructor:

Mario Santana Quintero, e-mail: Mario.santana@carleton.ca
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Class Lectures: Thursday 8:35 am - 11:25 am – Classroom
Virtual Office hours: Thursday 10:30 am – 11:25 am (email appointment required 24 hours ahead)
Teaching Assistants: see CULearn for details

Practicum and Fieldwork (3 hours):

Tutorials	Day	Times
ARCN 4100 A1 / CIVE 3207 A1	Monday	2:35 pm-5:25 pm
ARCN 4100 A3 / CIVE 3207 A3	Tuesday	8:35 am – 11:25 am
CIVE 3207 A2 / ARCN 4100 A2	Friday	8:35 am – 11:25 am

Course Description:

Recording the physical characteristics of historic structures and landscapes is a cornerstone of preventive maintenance, monitoring and conservation. The information produced by such work guides decision-making by property owners, site managers, public officials, and conservators. Rigorous documentation may also serve a broader purpose: over time, it becomes the primary means by which scholars and the public apprehend a site that has since changed radically or disappeared.

Our team-taught course has two aims: to acquaint students with a wide range of recording techniques and to help students decide which techniques are best suited to which sites and objectives.

Led by experts in the field, this blended course involves a mixture of synchronous meetings at scheduled time and asynchronous activities. All

the lectures and tutorials will be available online a week ahead of the schedule. Students are expected to be available during the synchronous meeting times.

ARCN 4100 / CIVE 3207 will be an introduction of condition assessments and will be further examined in the ARCN 4200/ CIVE 4601 – Building Pathology & Rehabilitation course (Winter 2021).

By the end of this course, students should be able to:

- Assess the role of visual information gathering in historic conservation, with an eye to national and international standards for such work.
- Distinguish the strengths and limitations of particular recording techniques.
- Demonstrate proficiency by applying specific techniques as a documentation provider and others as an informed user in recording historic sites.
- Analyze sites using these techniques.
- Understand the relationship between recording and good conservation decision-making.
- Design coherent presentations by integrating information gathered through these techniques of historic sites.
- Assemble a report of the course and lessons learnt in this term.

Because of its proximity and rich cultural landscape, Ottawa will serve as our study area. Each week, we will learn about a given recording technique during our lecture and apply it during lab asynchronously sessions. Particular synchronous sessions will be organized to answer enquiries about the lab sessions. Students will work on their assignments at home or immediate surroundings, they will gain access to datasets and information online to conduct their assignments.

Heritage Places

A list of historic places will be analyzed this fall, a list will be provided in CU Learn under Assignment 1.

Biographical sketch of instructor

Mario Santana-Quintero, is a professor on Architectural Conservation and Sustainability at department of Civil and Environmental Engineering Carleton University. He is also the Director of the NSERC Create program “Engineering Students Supporting Heritage and Sustainability (HERITAGEENGINEERING)” based at the Carleton immersive Media Studio Lab (CIMS). He has an architectural degree, holding a master in conservation of historic buildings and towns and a PhD in Engineering from

the R. Lemaire International Centre for Conservation (University of Leuven, Belgium). He is also a guest professor at the Raymond Lemaire International Centre for Conservation (University of Leuven). These past years he has been teaching also at the Universidad Central de Venezuela, Universidad de Guadalajara (Mexico) and Universidad de Cuenca (Ecuador). In the past, he was a Professor at the University College St Lieven and lecturer at the University of Aachen RWTH and the Historic Preservation Programme at the University of Pennsylvania between 2006 and 2011. Along with his academic activities, he serves as Vice president of the International Council of Monuments and Sites (ICOMOS) and he is the past president of the ICOMOS Scientific Committee on Heritage Documentation (CIPA). Furthermore, he has collaborated in several international projects in the field of heritage documentation for UNESCO, The Getty Conservation Institute, ICCROM, World Monuments Fund, UNDP, Welfare Association, and the Abu Dhabi Department for Culture and Tourism.

Technical Prerequisites

To be able to take the course and produce assignments students are required to:

Laptop / Desktop computer minimal configuration (recommended):

CPU: Intel VT-x 64bit Processors - i5/i7/i9 7th Gen or more (minimum)

Memory: 8GB RAM (minimum) Strongly recommend 16GB or more

Drive: 256GB or Larger SSD (Solid State Drive)

GPU: Nvidia Quadro, GeForce GTX, Radeon Pro, (>2GB Graphics Card)

Networking: WIFI (AC or AX) Recommend a 1Gig or Faster Ethernet Port or Adapter (Use a USB 3.0 to ethernet adapter so you do not need a physical ethernet port on your laptop)

Audio & Video: Camera, Microphone & Speaker

Software: the following software should be installed on students' laptops or desktops prior to the course:

Get AutoCAD 2018 through 2020 and Autodesk Recap (latest version). Free copies of AutoCAD and Recap release are available for download by registering at the Autodesk Education Community (<http://students.autodesk.com>). AutoCAD is also available at the computer lab in the event that you do not have a laptop computer.

Get the latest ArcGIS Pro license from the Carleton University Library, read: <https://library.carleton.ca/services/arcgis-student-edition>. Alternatively, students can use Quantum GIS, which is an open source and free GIS package available at <http://www.qgis.org>.

Get Bentley Context Capture (version v10.15.0.76), also bear in mind that an update of Bentley CONNECTION Client (to v10.0.19.27) is needed and an update of the NVIDIA GTX 1050 Ti video card driver (to 451.48 “standard”), a tutorial will be organized to install and get a license from Carleton to use this software.

Students are also expected to know the two-dimensional drawing features of Computer-Aided Design (CAD) application. For tutorials, Carleton offers free access to LinkedIn Learning <https://carleton.ca/learninganddevelopment/linkedinlearning/> here you can find CAD and other digital tools tutorials. Limited classroom instruction in the elements of CAD may be offered, depending on demand, but will not occur during course time.

It is recommended for the course to complete the following trainings:

- Learning AutoCAD (2h) Shaun Bryant
- AutoCAD 2020 Essential Training (3h 25m) Shaun Bryant
- AutoCAD: Construction Drawings (3h 18m) Shaun Bryant
- Learning FARO: Laser Scanning (39m) Dustin Manning
- 3D Scanning with a Camera (57m) Kacie Hultgren
- ReCap Workflow for Reality Capture (2h 52m) Paul F. Aubin

To access these trainings, read <https://students.carleton.ca/services/linkedin-learning/> and they are also listed in CU Learn.

Also, the Department of Civil and Environmental Engineering might provide remote access to computers with the following software for completing assignments:

- Bentley Context Capture and Point Tools software;
- Eventually Agisoft MetaShape (<http://www.agisoft.com>), a photogrammetric package will be available for certain areas of the IPD or Autodesk ReCap Photo (<https://www.autodesk.com/education/free-software/recap-pro>);
- AutoCAD 2020 (license available for students: <https://www.autodesk.com/education/free-software/all>)
- ArcGIS 10.5.1 (license available for students: <https://library.carleton.ca/services/arcgis-student-edition>);
- Autodesk Recap 2016 (license available for students: <https://www.autodesk.com/education/free-software/all>);

Other software that may be available at Carleton and that may be useful for the documentation course will be identified in the coming months.

Course Requirements

Attendance and participation

Students are strongly recommended to participate in all activities, such as lectures, **forums**, readings lectures and tutorials, ask questions, and provide feedback about assignments. Absences will generally be excused only for emergencies or other reasons given the distance learning environment.

The course synchronous components will be delivered with ZOOM, links to the video conferences will be provided ahead of time on CU Learn.

Individual and team performance

A number of assignments in this course are undertaken in teams. Team members are expected to contribute equally to group assignments, be courteous, review each other's work, and communicate the performance of their group to faculty at regular intervals.

Completion of Assignments (6) (including Tutorial workflows), Participation in all practicums, and Course report. For details, see below.

Assignments

Each exercise will allow meet learning outcomes of the course. Specific assignments will allow groups of students to compile a Course Report about the heritage recording work conducted during the course. **Tentative due dates are provided in this course outline but are subjected to change, updates will be agreed with the students at the beginning of the course and posted on CU Learn.**

Assignment 0: Introduce Yourself and Logistics Compliance

This is an individual assignment. Online courses can feel isolating and anonymous, so let's get to know one another!

Please post a short, 200-word paragraph introducing yourself to your classmates. Feel free to be creative. You are welcome to include a picture of yourself (or your pet!) in your post. You are also welcomed to record your introduction as a video rather than text.

Your introduction should answer the following questions:

- Basic Info – Your preferred name and hometown
- Where are you located during this course (e.g. Ottawa, Canada, elsewhere)

- Course Info – Why are you interested in Heritage Conservation?
- Career/Life Goals – What do you want to do after university? What do you want to achieve?
- Fun Fact – Tell us a fun fact about yourself!

Please include the following statement at the end of your post: “I (insert name), confirm that I have read and understood the entire syllabus for this course. If I have questions about the course, I promise to check the syllabus, the online material (assignment guides, tutorials, examples, etc.), before emailing the TA or Professor Santana *****

Also, in CULearn, fill the following forms and submit your answer:

1. Student Consent to Publish
2. Informed Consent agreement

Assignment 1: identifying the location of a “Historic Place” using Geographic Information Systems

This is an individual or group assignment (maximum two members). Students will identify an historic site on the list provided by the instructor and will consult the Canadian Register of Historic Places (<https://www.historicplaces.ca/en/rep-reg/search-recherche.aspx>). For those students living outside the city can choose an alternative historic place upon consultation with the instructor and Teaching Assistant but be aware that Carleton Library might not have data on that particular site outside Ottawa.

Furthermore, to fulfil the assignment, student will access the GIS resources of the library to download data and produce a GIS map of the selected site, the submission is a PDF of the map. An asynchronous tutorial session will be organized in the use of Geographic Information Systems. **Please download the attached spreadsheet and select a site, send an email to mario.santana@carleton.ca before Sept 14, 2020 at 12:00 pm, with your group and selected site.**

Assignment 2: Hand recording and site field notes

This is an assignment that is conducted individually. This assignment provides a basic understanding of an architectural space’s geometry and condition. Interior spaces are the focus. Each student will measure a room of choice, for example their bedroom, kitchen or another space using trilateration to produce a field note. During the asynchronous tutorial session, students will learn the techniques of site observation, note-taking, and hand surveying.

The resulting information will be scanned and the field note will be converted to CAD. Floor plan drawing should be provided in scale 1:50. The submission of scans versions of the notes and resulting CAD drawing shall be conduct on CU Learn according to your tutorial session.

Assignment 3: Site photography

This is an individual assignment. The purpose of this assignment is to understand the use and relevance of digital photography for heritage assessments. Each individual will produce a dossier compiled using record photography of a historic building in their community, prior to conduct the assignment, students will consult with the instructor and teaching assistant about the site selection.

The dossier should include a record photo of the site context, an elevation, a perspective, and details. The images should be classified according to the following aspects: architecture, condition and character-defining elements. The dossier will be delivered in PDF (delivered files should be according to appendix 1) and submitted on CU Learn. Condition photographs will illustrate surface material and structural conditions referenced in the written narrative. Expected deliverables (minimum):

- Five photographs, including a contextual architectural photograph, elevation, perspective and two details of Character Defining Elements:
- Two photographs showing condition, weathered areas on the site;
- Five photographs of character-defining elements of the selected historic place.

The submitted images should have at least 300 pixel/inch resolution, you can use a US Letter Size paper to fit each photograph (portrait or/and landscape). The photographs should be accompanied by a written document, explaining each of the photographs, and a photo key plan prepared using a site sketch locating were and the orientation of each of the photographs. **Select a building in your proximity, if you are in Ottawa your Assignment 1 building, or if prefer your own place.**

The student will submit a single PDF on CULearn, including and consolidating all the photographs and required documents. File Naming is of paramount importance.

Assignment 4: Sketching of a Character Defining Element

This is an assignment that is conducted individually. This assignment provides a basic understanding of Character Defining Element. **Students will select a building in their proximity, if in Ottawa use assignment 1 building, or their own place.** Sketch a historic assembly of the historic site selected. During the asynchronous tutorial, students will learn the techniques of identifying a structural or architectural detail and assembly that is evidence of a character Defining Element contributing to the significance.

The resulting sketch will be scanned, the submitted PDF should have at least 300 pixel/inch resolution, students can use a US Letter Size paper (portrait or/and landscape). The submission of the scans shall be conduct on CU Learn. An

asynchronous tutorial session will be organized in the sketching to record character defining elements.

Assignment 5: Producing a building elevation using photogrammetry, control points and CAD Overlay

This is an assignment that is conducted in groups of four students. The purpose of this exercise is to learn the use, benefits, and constraints of photogrammetry to prepare elevation drawings. Students are expected to successfully follow the asynchronous online tutorial.

Each team will prepare measured drawings, corresponding to each building elevation available using a dataset provided by the instructor and teaching assistance (on the dataverse platform), which includes photographs and measured controls to reference and orientate photogrammetric models. The assignment is conducted using specialized software. This software allows users to produce an ortho-corrected image of surfaces from 3D models generated by the application. The main features of the elevations should be drawn from the resulting ortho-image using CAD overlay (e.g. Windows, doors, pediment, etc), the expectations of each deliverable will be in agreement with the instructor and teaching assistants.

For access to dataverse, download the spreadsheet available at CU Learn.

Secret Questions

Students are expected to complete secret questions on CU Learn. These questions will appear on CU Learn unannounced on Thursdays at 8:30 am and will be available throughout that particular day. The contents will deal with material discussed in the lectures and from selected readings. Each question is worth 1 % of the course for a total of 25 %.

Course Report

This is a group task according to Assignment 5. The course report should summarize the skills learned during the course, indicating opportunities and challenges. The instructor and teaching assistants will provide a template for this report. The document should not exceed 3,000 words single spaced (around 6 pages) and should be illustrated with figures from assignments. Bibliographic references should be cited according to accepted standards, consult IEEE Citation Style (<https://library.carleton.ca/help/ieee-citation-style>).

The teams are expected to produce a Virtual Tour utilizing the <https://kuula.co/> or <https://www.theasys.io> free version with the panoramic images provided in the dataverse portal of the sites studied the semester.

Furthermore, the report should be structured in appendix that contain all the assignments, such as GIS map, sketches, measured drawings and photographs.

During the synchronous session, students will agree with the responsible teaching assistant about the contents of the course report.

The data utilized to fulfil the assignments should also be submitted, a dropbox or google drive access will be provided, single files should not exceed 2 GB of size, also the file naming should be structured according to the course outline appendix 1. The report will be upload in the Universities dataverse system as a posterity record of a historic site, it is important to understand this obligation.

Grading

Participation and technical compliance	5%	of final grade
Assignment 0	5%	
Assignment 1	5%	
Assignment 2	5%	
Assignment 3	10%	
Assignment 4	5%	
Assignment 5	20%	
Secret questions	25 %	
Course Report	20%	
	100%	

Final letter grades will be figured on the basis of these assignments.

* Individual and Group evaluations will be conducted using peer review and a meeting with the team.

Tentative Course Schedule

Week	Class	Tutorial	Description	Approach
			Module 1: Introduction	
1	Sept 10		L1: Introduction to Historic Site Recording and Assessment: concepts and ethical commitments L2: Course Outline and available Historic Sites L3: Making a statement of significance in Canada (Laurie Smith) L4: Making a Heritage Site Plan using Geographic Information Systems (GIS), locating the boundaries and urban context (Rebecca Bartlett) Forum 1: Question and Answers Module 1	Synchronous. Video recording will be provided of this activity.
	Sept 8/10		No tutorials this week	
	Sept 12		Submission of Assignment 0 (deadline 11:55 pm)	CU Learn
			Module 2: Digital Photography	
2	Sept 17		L5: The Role of Digital Photography in Historic Site Recording and Assessment	Synchronous. Video recording

			L6: Architectural Photography - Capturing Character: photographing Heritage Architecture (Peter Coffman) L7: Using Photography Historic Site Recording and Assessment (Christian Ouimet) Forum 2: Question and Answers Module 2	will be provided of this activity.
		Sept 14/15	Logistic session with Teaching Assistants	Synchronous meetings
			Module 3: Conventional Recording Tools	
3	Sept 24		L8: Making Field notes and sketches for recording Heritage Sites L9: Assessing Historic Sites in Ottawa according to site custodians and facility manager's needs Forum 3: Question and Answers Module 3	Synchronous. Video recording will be provided of this activity.
		Sept 21/22	T1: Identifying Character Defining Elements and drafting a statement of significance T2: Using Geographic Information Systems to make a site plan T3: Record Photography and processing	Asynchronous and Synchronous meetings for Questions and answers
4	Oct 1		L10: Using a Total Station for Historic Site Recording and Assessment	Synchronous. Video recording will be provided of this activity.
		Sept 28/29	T4: Hand Survey, sketching and preparing field notes	Blended
	Oct 2		Submission of Assignment 1 (deadline 11:55 pm)	CU Learn
			Module 4: Imaging Recording Tools	
5	Oct 8		L11: Rectified Photography for Historic Site Recording and Assessment L12: Photogrammetry for Historic Site Recording and Assessment L13: Introduction to the Dataverse platform to retrieve, upload and store data from historic sites in Ottawa (Chris Shoniker) Forum 4: Question and Answers Module 4	Synchronous. Video recording will be provided of this activity.
		Oct 5/6	Work on assignments and meetings with Teaching Assistants	Blended
			Module 5: Scanning Recording Tools	
6	Oct 15		L14: 3D Scanning for Historic Site Recording and Assessment Forum 5: Question and Answers Module 5	Synchronous. Video recording will be provided of this activity.
		Oct 12/13	Work on assignments and meetings with Teaching Assistants	Blended
			Module 6: Other Recording Tools	
7	Oct 22		L15: Creating a Virtual Tour using Panoramic images to access sites from home L16: Global Positioning Navigation Systems for Historic Site Recording and Assessment (Guest speaker) L17: The use of Remotely Piloted Aircraft Systems (RPAS) for Historic Site Recording and Assessment Forum 6: Question and Answers Module 6	Synchronous. Video recording will be provided of this activity.
		Oct 19/20	T5: Photogrammetry and CAD overlay to produce a measured drawing	Blended
	Oct 23		Submission of Assignment 2 (deadline 11:55 pm)	CU Learn
Oct 26-30			Reading Week	

Module 7: Report of Historic Sites				
8	Nov 5		L18: Making a Course Report about a Historic Site <u>Forum 7: Question and Answers Module 7</u>	Synchronous. Video recording will be provided of this activity.
		Nov 2 / 3	Work on assignments and meetings with Teaching Assistants	Blended
	Nov 6		<u>Submission of Assignment 3 (deadline 11:55 pm)</u>	CU Learn
Module 8: Best Practices and emerging approaches				
9	Nov 12		L19: Project best practices and lessons learned in Historic Site Recording and Assessment around the World	Synchronous. Video recording will be provided of this activity.
		Nov 9/10	T6: Accessing Heritage Places from home using Panoramic Tours Work on assignments and meetings with Teaching Assistants	Blended
10	Nov 19		L20: Project best practices and lessons learned in Historic Site Recording and Assessment around the World	Synchronous. Video recording will be provided of this activity.
		Nov 16/17	Work on assignments and meetings with Teaching Assistants	Blended
	Nov 22		<u>Submission of Assignment 4 (deadline 11:55 pm)</u>	CU Learn
11	Nov 26		L21: Project best practices and lessons learned in Historic Site Recording and Assessment around the World <u>Forum 8: Question and Answers Module 8</u>	Synchronous. Video recording will be provided of this activity.
		Nov 18/19	Work on assignments and meetings with Teaching Assistants	Blended
12	Dec 3		L22: Accessing Heritage Places from Home in times of a pandemic	Synchronous. Video recording will be provided of this activity.
		Nov 30 / Dec 1	Work on assignments and meetings with Teaching Assistants	Blended
	Dec 4		<u>Submission of Assignment 5 (deadline 11:55 pm)</u>	CU Learn
Module 9: Lessons Learned				
13	Dec 10		L22: Course Wrap-Up <u>Forum 9: Question and Answers Module 9</u>	Synchronous. Video recording will be provided of this activity.
		Dec 7/8	Work on Course Report and meetings with Teaching Assistants	Blended
F	Dec 16		Delivery of Course Report (Deadline 4:00 pm) and data to submit to Dataverse	CU Learn / Dropbox or Google drive

Assignments deadlines and lectures might be modified according to course development needs

Submission summary

Assignment	Deadline
0	Sept 12 – 11:55 pm (CULearn)

1	Oct 2 – 11:55 pm (CULearn)
2	Oct 23 – 11:55 pm (CULearn)
3	Nov 6 – 11:55 pm (CULearn)
4	Nov 20 – 11:55 pm (CULearn)
5	Dec 4 – 11:55 pm (CULearn)
Course Report	Dec 16 – 4:00 pm (CU Learn, Dropbox or Google Drive)

Readings

Assigned readings (order by relevance):

1. Letellier, R. Schmid, W. LeBlanc, F. 'Guiding Principles Recording, Documentation, and Information Management for the Conservation of Heritage Places' The Getty Conservation Institute, J. Paul Getty Trust (2007), http://www.getty.edu/conservation/publications_resources/pdf_publications/recor dim.html (last accessed: June 12, 2020)
2. Eppich, E. Chabbi, A. ed. 'Illustrated Examples Recording, Documentation, and Information Management for the Conservation of Heritage Places' The Getty Conservation Institute, J. Paul Getty Trust (2007), https://www.getty.edu/conservation/publications_resources/pdf_publications/reco rdim_vol2.html (last accessed: June 12, 2020)
3. Canada Historic Places "Standards and Guidelines for the conservation of historic places in Canada", 2nd edition, Canada ISBN 978-1-100-15953-9, <http://www.historicplaces.ca/en/pages/standards-normes/document.aspx> (last accessed: June 12, 2020)
4. Santana Quintero, M., R. Awad, and L. Barazetti, 2020, Harnessing digital workflows for the understanding, promotion and participation in the conservation of heritage sites by meeting both ethical and technical challenges: Built Heritage, v. 4, no. 1, p. 6, <https://link.springer.com/article/10.1186/s43238-020-00005-7>
5. A. Federman, M. Santana Quintero, S. Kretz, J. Gregg, M. Lengies, C. Ouimet, & J. Laliberte. (2017). UAV PHOTGRAMMETRIC WORKFLOWS: A BEST PRACTICE GUIDELINE. The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLII-2-W5(2), 237–244. https://ocul-crl.primo.exlibrisgroup.com/permalink/01OCUL_CRL/1vru3a1/doaj_soai_doaj_or g_article_d72f057b429b4eadbf4b2de0b70f3b32
6. National Park Service, U.S. Department of the Interior, Recording Historic Structures and Sites with HABS Measured Drawings, <http://www.nps.gov/hdp/standards/HABS/HABSrecording.htm> (last accessed: June 12, 2020)
7. Adams, A. Drawing for Understanding, Historic England (2016), <https://historicengland.org.uk/images-books/publications/drawing-for-understanding/> (last accessed: June 12, 2020)
8. Bedford, J. Papworth, H. ed. 'Measured and drawn: techniques and practice for the metric survey of historic buildings' Historic England, Kemble Drive, Swindon (2010), <https://historicengland.org.uk/images-books/publications/measured-and-drawn/> (last accessed: June 12, 2020)
9. UNESCO World Heritage Operational Guidelines (2019) <https://whc.unesco.org/document/178167> (last accessed: June 12, 2020)
10. Historic England "Understanding Historic Buildings" (2016), <https://historicengland.org.uk/images-books/publications/understanding-historic-buildings/> (Last accessed: June 12, 2020)
11. Santana Quintero, M., Addison, A., Severo, M. (2008). Digital Archives for Conservation and Management. In: Neuckermans H., Zambelli M., Janowiak A. (Eds.), *Browsing architecture: Metadata and Beyond*, Chapt. 26 (pp. 306-317). Stuttgart, Germany. Fraunhofer IRB verlag (2008),

- <https://lirias.kuleuven.be/bitstream/123456789/197982/1/> (last accessed: June 12, 2020)
12. Santana Quintero, m., Stulens, A., Addison, A., Pletinckx, D. (2008). Monitoring Monuments: A low-cost digital early warning system for preventive conservation of built heritage. (Pletinckx, Daniel, Ed.). Know How Books, Kista, Sweden: EPOCH Know How Books (2009), https://www.academia.edu/2519455/Monitoring_Monuments_A_low-cost_digital_early_warning_system_for_preventive_conservation_of_the_built_heritage (last accessed: June 12, 2020)
 13. Bedford, J. Pearson, T. Thomason, B. Traversing the Past, Historic England (2016), <https://historicengland.org.uk/images-books/publications/traversingthepast/> (last accessed: June 12, 2020)
 14. Historic England '3D Laser Scanning for Heritage: Advice and guidance to users on laser scanning in archaeology and architecture', (2018), <https://historicengland.org.uk/images-books/publications/3d-laser-scanning-heritage2/> (last accessed: June 12, 2020)
 15. Historic England 'The Presentation of Historic Buildings survey in CAD', <https://historicengland.org.uk/images-books/publications/historic-building-survey-in-cad/> (last accessed: June 12, 2020)
 16. Van Genechten, B. 'Theory and practice on Terrestrial Laser Scanning: Training material based on practical applications' Santana Quintero, M. Lerma, J. ed., Universidad Politecnica de Valencia Editorial (2008), <https://lirias.kuleuven.be/handle/123456789/201130> (last accessed: June 12, 2020)
 17. Patias, P. Santana Quintero, M. Introduction to Heritage Documentation, In CIPA Heritage Documentation best practices and applications, Stylianidis, E. Patias, P. Santana Quintero, M. ed. The ICOMOS & ISPRS Committee for Documentation of Cultural Heritage. The ISPRS International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Vol. XXXVIII-5/C19. ISSN 1682-1750, http://www.close-range.com/docs/CIPA_Heritage_Documentation_Series_1__2007-9_Best_Practices.pdf (last accessed: June 12, 2020)
 18. UNESCO Managing Disaster Risks for World Heritage (2010), Paris, France, <http://whc.unesco.org/en/managing-disaster-risks/> (last accessed: June 12, 2020)
 19. UNESCO Preparing World Heritage Nominations, World Heritage Resource Manual (2011), Paris, France, <http://whc.unesco.org/en/activities/643/> (last accessed: June 12, 2020)
 20. The Getty Conservation Institute Conservation perspectives: Heritage Inventories, The GCI Newsletter (2013) http://www.getty.edu/conservation/publications_resources/newsletters/28_2/index.html (last accessed: June 12, 2020)

Recommended books:

1. Burns, J.A. 'Recording Historic Structures' 2nd edition, John Wiley and Sons (2004)
2. Council of Europe 'Guidance on inventory and documentation of the cultural heritage' (2009)
3. ICOMOS UK 'Guidelines to Recording Historic Buildings' (1996).
4. Leach, P E. The Surveying of Archaeological Sites. Archetype Publications, 1994.
5. Swallow, P. Dallas, R. et al 'Measurement and Recording of Historic Buildings' 2nd edition, Donhead (2004)

INTELLECTUAL PROPERTY, COPYRIGHT AND FAIR DEALINGS

As a condition of participating in the course and for the purpose of academic evaluation, students will be required to upload in-progress and completed work to the instructor's desired online platform(s). It is expressly understood that any such records or copies of student work will be used for nonprofit presentation and for the purposes of this authorization, nonprofit presentation includes showing, screening, publication and releases or presentation as a public service by internet distribution, commercial broadcasting or publication in furtherance of course-specific and institutional learning objectives.

For reasons of intellectual property and copyright, please under no circumstances download course documents or presentations for distribution without first acquiring written permission of the author/instructor.

ACADEMIC ACCOMMODATIONS

You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see link below

Religious obligation: write to me with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see link below

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to

ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally scheduled exam (if applicable). <https://devsite.carleton.ca/equity/accommodation/academic/course-outline-wording/>

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, <https://carleton.ca/sexual-violence-support/>

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

Student Wellness Resources

- General (All Resources Available): <https://students.carleton.ca/wellness/>
- Mental Health and Wellbeing: <https://students.carleton.ca/services/mental-health-well-being-website/>
- International SOS: <https://students.carleton.ca/services/international-sos/>
- Therapy Assisted Online (TAO): <https://students.carleton.ca/services/therapy-assisted-online/>

ACCESSIBILITY

Students with disabilities requiring academic accommodation in this course must register with the Paul Menton Centre for Students with Disabilities (PMC) for a formal evaluation of disability-related needs. Documented disabilities could include but are not limited to mobility/physical impairments,

specific Learning Disabilities (LD), psychiatric/psychological disabilities, sensory disabilities, Attention Deficit Hyperactivity Disorder (ADHD), and chronic medical conditions. Registered PMC students are required to contact the PMC, 613-520-6608 every term to ensure that instructor receives your Letter of Accommodation no later than two weeks before the first assignment is due or the first in-class test/midterm requiring accommodations. If you only require accommodations for your formally scheduled exam(s) in this course, please submit your request for accommodations to PMC by the deadlines published on the PMC website:

<https://carleton.ca/pmc/>

<https://carleton.ca/registrar/registration/dates-and-deadlines/>

STUDENT CONDUCT

Please refer to <https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/> for specific information regarding Student Conduct and Academic Integrity standards.

STUDENT RESPONSIBILITY

<https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/student-responsibility/>

CONDUCT DISCRIMINATION AND HARRASSMENT

<https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/academic-integrity-and-offenses-of-conduct/>

ACADEMIC INTEGRITY

The University has adopted a policy to deal with allegations of academic misconduct. This policy is expressed in the document Carleton University Academic Integrity Policy, found here: <https://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/academic-integrity-and-offenses-of-conduct/>

SECURITY AND SAFETY

Avoid Working Alone After Hours · In Case of Emergency, Dial Extension 4444 from any campus phone

Appendix 1: digital files format and naming

The following guidelines pertain to the creation and manipulation of digital files for the historic site recording assessment course, the purpose is to provide a framework for appropriate storage, retrieval and provenance of files prepared during the course. The data produced in the course will be stored for posterity on Carleton's dataverse system: <https://library.carleton.ca/services/dataverse> . This will make it available to the university community.

Digital Images

File Name

Image files should be named according to the following format:
AC_ SITE# _ YEAR _ PHOTO# . EXTENSION

The following explains each site within this file naming convention:
AC: Letter "AC" precedes SITE# to indicate ARCN /CIVE course.

SITE#: 3-digit acronym, which indicates the acronym assigned to each of groups in the course. This suffix will be decided by your group on Assignment 1, for example Bytown museum can be BTM or Mayfair building could be MFB.

YEAR: 4 digit number indicating year in which photo was taken (i.e., created).

INITIALS: 3-digit acronym, indicating the name of the author taking the photograph (i.e., MSQ).

PHOTO#: 4 digit number assigned to the photo to distinguish it from other photos of the same site created in the same year. If the number is less than 4 digits, then it should be preceded by an appropriate number of 0's.

EXTENSION: The file type, such as JPG.

The following is an example of an image file name following this convention:
AC_MFB_2016_ARCH0002.jpg

File Format

It is recommended that image files be in the JPG format to minimize file size.

File Size

It is recommended that image files be no larger than one megabyte (6 MB) in size.

Description Information

The following information should be recorded to describe the photograph in the accompanying spreadsheet:

- Specific date photo taken/created (in the following format): YEAR (4 digit number) MONTH (3 digit alphabetic abbreviation) DAY (2 digit number; if date is only 1 digit, then precede with a 0);
- Photographer name (in the following format): SURNAME, GIVEN NAME
- Image copyright holder: indicate name of institution(s) or individual(s) holding image copyright; if copyright no longer held (e.g., expired) then indicate “no copyright”, in most cases indicate Carleton University.
- Site name: indicate the site primary name in agreement with instructors.
- Subject of photograph: indicate the subject of the photograph, which should describe the reason for taking the photo; the following are examples:
 - Context photography: interior and exterior (eg. Situating the site in its environment, west facade, general exterior view, etc)
 - Character defining elements (eg. Ornamentation, hardware, etc)
 - Condition photography (eg. Disturbances, threats, decay).

CAD drawings, point clouds and other electronic files

File Name

AutoCAD files should be named according to the following format:
AC _ SITE# _ YEAR _ DRAWINGNAME# . EXTENSION

The following explains each site within this file naming convention:
AC: Letter “AC” precedes SITE# to indicate ARCN /CIVE course.

SITE#: 3-digit acronym, which indicates the acronym assigned to each of groups in the course. This suffix will be decided by your group on Assignment 1, for example Bytown museum can be BTM or Mayfair building could be MFB.

YEAR: 4 digit number indicating year in which photo was taken (i.e., created).

DRAWINGNAME#: 4 digit number assigned to the drawing to distinguish it from other drawings of the same site created in the same year. If the number is less than 4 digits, then it should be preceded by an appropriate numbers of 0's.

EXTENSION: The file type, such as DWG.

The following is an example of an image file name following this convention:
AC_001_2012_0002.DWG

Description Information

The following information should be recorded to describe the photograph in the accompanying spreadsheet:

- Specific date when the drawing was last updated (or created) (in the following format): YEAR (4 digit number) MONTH (3 digit alphabetic abbreviation) DAY (2 digit number; if date is only 1 digit, then precede with a 0);
- Author name (in the following format): SURNAME, GIVEN NAME
- Drawing copyright holder: indicate name of institution(s) or individual(s) holding image copyright; if copyright no longer held (e.g., expired) then indicate “no copyright”, in most cases indicate Carleton University.
- Site name: indicate the site primary name in agreement with instructors.
- Subject of the drawing: describe the context and contents of the drawing (eg. Plan section: level 1: condition assessment)

Guidelines for the layer naming and structure will be discuss during the class and agreed for submission of the assignments.

Other electronic files' submission

Students are expected to submit all the files used to produce the different assignments and course report in digital format. Please consider using similar naming guidelines as provided for digital images and CAD drawings to name and organize all your files. The provenance information of your files is crucial for the storage, management and retrieval of these files in the future.